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The Food Safety

Educator

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■ Special Conference Issue: Thinking Globally, Working Locally

September 2002, Orlando, FL:

The contrast was complete. Outside of the hotel, people were ambling down amusement park sidewalks, two-story outdoor screens were blasting music videos, and kids were careening down water slides.

Inside the hotel, 600 people had their minds on only one thing: food safety education. They were attending *Thinking Globally, Working Locally: A Conference on Food Safety Education*.

Everywhere you looked, participants were funneling into breakout sessions, participating in an on-line survey at computer kiosks, and checking out the myriad posters on food safety education initiatives and research.

People were networking, exchanging e-mail addresses, and starting partnerships. In the words of one educator, she was "soaking it all up like a sponge, so I can go home and give it all out."

Conference speakers covered the gamut, from global issues to local initiatives.

Keynote speaker Sir John Krebs, Chairman, Food Standards Agency, the United Kingdom, explored the dilemma of building public trust when that trust has been shaken.

Leaders of U.S. federal agencies responsible for food safety reported

on progress and the challenges ahead. A number of experts noted new concerns from evolving microbiological threats. But while the war on microbes may never be won, it's also not lost, one expert said. Why? Because "we can learn and transfer knowledge. Food safety education folks will always have a job to do," he added.

Consumer researchers from national and local levels pointed to trends that were thought-provoking as they noted that knowledge of safe food handling does not necessarily translate to behavior. Consumers, they said, tend to be overconfident and unaware of the mistakes they make. This led one researcher to observe that "the most important tool in the kitchen is the human brain."

A general session on crisis communications and biosecurity launched the second day of the conference. Communicators and public health officials drew from their experiences dealing with anthrax. Their stories illustrated why, as one said, "preparation is a journey, not a destination."

On the second day, concurrent sessions ran, offering participants information on writing grants; establishing research programs; highlighting local, regional, and national partnerships; and showcasing food safety education projects guaranteed to open eyes.



The final half day of the conference was testimony to the commitment of food safety educators. Packed tables of participants networked regionally, reviewed the results of the conference survey regarding goals, and articulated their suggestions for future directions. It was high energy, said one participant. "I'm ready to go home and get going!"

Even if you didn't make it to Orlando, you can still learn from the conference. This special issue highlights conference sessions and provides access to presentations featured on the Web at:

<http://www.fsis.usda.gov/Orlando2002>

Conference proceedings will be available later in 2003 and announced in this newsletter. •

■ Recognizing & Recharging Food Safety Educators

Top federal administrators from key food safety agencies joined educators in Orlando, recognizing their contributions and encouraging them to “press on.”

Under Secretary for Food Safety for the U.S. Department of Agriculture (USDA) Dr. Elsa Murano welcomed conference attendees and noted that she’s been on the road herself with the educational messengers BAC! and Thermy™, visiting senior centers and schools.

And while she’s been teaching food safety, she said, she’s also been learning. “I’ve learned there are many eager students out there—of all ages and from all backgrounds. At the senior center I visited in San Antonio, I was surprised at how many basic questions people had about handling and storing food safely....”

“So there are lots of opportunities out there for us, as educators, to make a difference. And I have seen first hand your commitment to spreading food safety messages.”

As the top public health official at USDA, Murano’s primary role is to oversee the safety of meat, poultry, and egg products. She recognizes, she said, that food safety education is not a substitute for, but a complement to, science-based food safety policies.

“We will continue to strive for greater reductions in harmful pathogens within plants. But regardless of what we can accomplish, consumers will always have an important role to play.”

Murano recognizes the difficulties inherent in changing behaviors as well as dealing with diverse populations. “Despite these challenges,” she said, “I am an optimist at heart. I believe we can truly make a difference in changing behavior.”

“I think it is very exciting to see how the science of food safety education is evolving in terms of developing messages and targeting audiences. Just as we are learning in medicine

that not all medications work the same for all people...we know that one size does not fit all in education. We cannot reach all people with the same messages and the same methods of delivery.

“We know that one size does not fit all in education. We cannot reach all people with the same messages and the same methods of delivery.”

—Dr. Elsa Murano

“I want to assure you,” she continued, “that we are committed to helping you meet these food safety education challenges, because we are all in this together...We are your partners, and we will continue to be your partners.”

Her remarks can be accessed at: http://www.fsis.usda.gov/OA/speeches/2002/em_edu.htm

Dr. Rodney Brown, Deputy Under Secretary for Research, Education, and Economics, USDA, told educators at the conference, “I commend you. You are in a field that saves people’s lives by teaching food safety.”

Observing how the world has changed in the past 100 years, Brown called for extending the “farm-to-table” food safety concept to the whole world.

“It’s a tremendous challenge and we are determined to accomplish it,” he said.

“The extension service is one of the strongest and most capable outreach organizations in the world....”

“Eating should not be a hazardous action. On a numerical basis, it isn’t. Many things we do every day have much higher risks. But it is not acceptable to have risks from eating.

“We have the information we

need. We have the people. We need to broaden and deepen the things you are doing...and keep keeping at it!”

Joe Levitt, Director, Center for Food Safety and Applied Nutrition, Food and Drug Administration (FDA), Department of Health and Human Services, told conference participants: “If you haven’t figured it out already, food safety has the attention of everybody in Washington. The issues of food safety have been so captivating and so critical that they have caught on everywhere.

“Food safety is a compelling public health problem...and we need you to press on.

“Food safety is not just a national issue, it is a global issue. What we do in food safety affects every single person in this country every single day. I don’t know what can be more important than that.”

Levitt acknowledged challenges posed by changes in food production—including globalization of the food supply—and increases in the numbers of people especially vulnerable to foodborne illness. But at the same time, he said, food safety systems have changed as well.

He pointed to stronger prevention programs, improved agricultural practices, the FDA *Food Code*, better surveillance, and quicker response systems.

Noting recently reported declines in foodborne illness (*The Food Safety Educator*, Vol. 7, No. 2), he said, “You don’t get these results from just sitting around. And everybody here has played a major role in that.”

“Where does the role of food safety education fit in?” Levitt asked. “It is central and it is critical,” he said, adding that education programs need to be ongoing and enduring.

“I hope that this week provides, if you will, a little bit of a booster shot. So we can all go back to our communities and stand up and make our food safer,” he encouraged. •

■ In the Wake of Distrust...Building Trust

Sir John Krebs, Chairman of the United Kingdom's Food Standards Agency, has been in a difficult spot: guiding the formation of the Food Standards Agency in the wake of distrust brought about by a series of food safety crises.

In addition, Sir John pointed out that most countries in the European Union have or are about to set up independent food safety agencies. "So it's a time of great change," he said.

"You in the U.S. have had an independent food safety system for about a 100 years, so you might justifiably say that we are a bit late playing catch-up."

The Food Standards Agency was created 2 1/2 years ago, largely in response to the crisis brought on by the discovery of bovine spongiform encephalopathy in cattle.

Against this "mood of suspicion," Sir John said, "we have tried to build trust in the way that food standards issues are handled in the United Kingdom."

"When we set out trying to move along this road of earning public trust and confidence, we realized we needed to be very different from the past," he said.

One of the things they recognized, he said, was that *how* they make decisions was just as important in some ways as the decisions themselves.

"So we've put a lot of thought into how decisions are made," he explained.

The Food Standards Agency is led by a board that is detached from the political process. The board meets every 6 weeks and makes policy decisions in public.

It was important, said Sir John, to recognize that "education is a two-way process. People tell you, as well as you tell them."

As a result, all stakeholders are brought into the public discussion. "We don't expect absolute consensus," said Krebs, "but people have confidence in the process."

Survey results show marked improvement in public trust.

In 2000, only 25 percent of the public felt they could trust the Food Standards Agency's food policies. In 2001, that figure rose to 44 percent.

More people also believe the Food Standards Agency's information is reliable. In 2000, 75 percent felt information was reliable. By 2001, that figure had risen to 93 percent.

Sir John is interested in the "interface between scientific knowledge and public policy." In the past, he said, "we felt that if we educated people about the science of our policies resistance would fade.

"We now realize that we need to learn what people think and respond to their concerns. We need to think of science within society."

In the past, he said, "we assessed risk and gave advice." Today, he said, there is a more complex message which, among other things, recognizes that science changes.

Our goal, said Sir John, is to "get public debate going to raise awareness about choices" and engage the public in a dialogue. •

■ The War on Pathogens

Assessing the "state of the union" on food safety, "we are not losing the war...unfortunately we can't win it either," declared Dr. Art Liang, Director, Food Safety Office, the Centers for Disease Control and Prevention.

To provide perspective, Liang looked back to 1900. At that time, the leading cause of death in America was tuberculosis, primarily from unpasteurized milk. The third leading cause of death was diarrhea.

Today, neither of those illnesses appears in the top 10.

In the 1970's, he reported, "We were doing so well, we thought the time had come to close the book on infectious diseases. But while we were declaring victory, things were

happening in the microbial world."

Thirteen new types of pathogenic microbes have been identified since 1973. Today we recognize many more pathogens, parasites, and viruses that can cause foodborne illness.

But most significantly, Liang said, "A lot of the simple problems have been solved when it comes to foodborne pathogens. The complex issues are ahead of us.

"Norwalk virus, for example, is complex to solve. It can be transmitted by food or person-to-person. It's hardy and low doses cause illness."

Norwalk virus is the single largest cause of foodborne illness—more than all other identified causes combined.

However, pathogens—*Salmonella*, *Listeria monocytogenes*, and *Toxoplasma gondii*—remain the leading cause of death.

The way to solving the problems presented by pathogens is also strewn with complexity: *E. coli* O157:H7 does well in acid foods; *Listeria monocytogenes* continues to multiply at refrigerator temperatures. And Liang noted increased issues with pathogens resistant to antibiotics.

Another complex challenge: There are five times more foodborne illnesses caused by unidentified agents than by identified agents. Much is yet to be learned, he said.

(continued on page 5)

■ Crisis Communications: Lessons From Anthrax

The View From New York City

“New York City well deserves the reputation for being one of the most well-prepared cities in the country,” said Sandra Mullin, associate commissioner of the New York City Department of Health and Mental Hygiene.

On September 11, 2001, New York City public health officials issued a broadcast alert to hospitals asking them to report anything unusual.

But in this instance, they weren’t looking for illnesses in the right places, Mullin reported. Anthrax didn’t turn up in emergency rooms. It turned up in a doctor’s office where a patient appeared in early October with an unusual skin condition.

“We are always asking if we are prepared,” Mullin said, “but preparation isn’t a static point. It’s always changing. We need to remember that preparation is a journey, not a destination.”

Dealing with the anthrax crisis was a lesson in reverberating impact and risk communication. As Mullin noted, there were 2 anthrax letters, 8 cases, 1 death, 600 reported cases, and “8 million anxious New Yorkers.”

“You need to recognize that even though the risks are small, people will worry. And you need to figure out how to meet the mental health needs of a terrified population,” she said.

People wanted to know what to do about the anthrax threat, Mullin recounted, but knowledge was changing early on. They did have a hotline operating 24 hours a day, a Web site, and daily press briefings.

“It was certainly one of the greatest media crushes I’d ever dealt with,” Mullin said.

Drawing from her experiences, Mullin has cogent advice:

- During a crisis, don’t do a dissertation on risk comparisons, especially those loaded with data. “Don’t expect this to work in your favor. People aren’t open to listening to this. They feel patronized. They feel cornered. Data do not impress people when they are upset,” she said.

Quoting risk communications expert Peter Sandman, Mullin noted that people are sometimes more afraid of the things that don’t kill them than the things that do.

- Build trust before a crisis. This includes building trust with the public, partners in government, industry, and the media. Meet with stakeholders before a crisis and establish lines of communication.

- Empathize with the public. Again drawing on Sandman’s advice, Mullin recommends that leaders be able to “model being able to bear fear” and uncertainty. “Let people be afraid,” she said. “It’s a terrifying situation. Don’t tell people they shouldn’t be afraid.”

- Don’t use reassurance to minimize concern. “The principle of talking straight is never more critical than during a crisis,” Mullin said. False reassurances have a potent kickback effect. Once credibility is lost, it may not be regained.

- Don’t be afraid to say you don’t know. “We don’t do this enough,” she said, “and I think it’s a critical thing to remember. It’s better to irritate people by saying you don’t know than to lose credibility later.”

- The public wants to take action; channel that, Mullin advised. “In a crisis situation,” she said, “people tend to be brave and more tolerant of uncertainty than we realize.”

Presentation accessible on the conference Web site. •

The View from CDC

“Our world changed on September 11—and it changed again on October 4 when headlines about anthrax hit every newspaper in the country,” said Kay Sessions Golan.

Golan knows. She was director of media relations for the Centers for Disease Control and Prevention (CDC) in October 2001.

For Golan, the moment of change came when she was moving through an ordinary October evening.

“I was in the car coming back by myself from seeing my son’s play—for the fourth time that weekend,” she said.

As Golan drove, she listened in to a conference call from CDC investigators reporting on the first reported anthrax case in Florida. The investigators dropped a bombshell—they had found anthrax on the victim’s computer keyboard. “I knew then. I knew it wasn’t naturally occurring. And in the background on the call, I could hear police sirens as they came to seal the building,” Golan said.

Golan turned her car from its track home and headed to the press office, which she didn’t leave until 2 o’clock the following morning.

For the next 3 months nothing was as usual. The normal volume of press calls at CDC ran 25 to 75 calls a day. Now they were running 350.

As Golan explained, “we needed to feed the beast,” the virtually insatiable media need for information.

Managing that need is no small task, especially when the question is: “What’s happening?” And the answer is: “We’re not sure.”

How did Golan manage? What was key?

“We knew from earlier work we had done concerning public expectations and CDC that people were looking for two things from us: timeliness and accuracy.

"Now, these two concepts can be in conflict—that was our most critical problem—balancing the two." That balancing act was also their core function, Golan realized. To achieve it, they worked off of this formula:

"Tell people what you know. Tell them what you don't know. Tell them what you're going to do next," said Golan.

"Tell people what you know. Tell them what you don't know. Tell them what you're going to do next."

—Kay Golan

Because timeliness and accuracy are equally important in the formula, Golan would not provide public statements that went beyond the science. But she also needed to let the public know they were looking for the answers.

Other keys:

- CDC had two teams operating, and "that was a lifesaver. We needed to rotate staff, and that included me. We worked 4 days on and 3 days off," Golan said.
- They used a multi-channel approach to get news out—but the single most effective tool was the daily telebriefing.

"It gave the media information it needed every day—and it allowed us to manage the time of the science experts. They didn't have the time to answer media questions all day—they needed to try to solve the problem. We took their time for an hour and then they got back to the task at hand—looking for answers to questions never before asked," she said.

- Stay in your niche, stick with your core functions. "When there are so many players in an emergency situation, it's important not to speak to issues outside your area," Golan said.

Her recommendations for crisis communicators:

- Set up emergency teams in advance and let them work together.
- Pay attention to little things—have a database of names and phone numbers on your handheld computer.
- Get talking points on topics in advance of a crisis. Difficult to do, but important.

Presentation accessible on the conference Web site. •

The View Internationally

"The events of September 11 were headline news in the Netherlands," said Irene E. van Geest-Jacobs with the Ministry of Agriculture and Fisheries, the Netherlands. "They also made us realize the vulnerability of an open society and highlighted the importance of taking precautions," she said.

Some of her key concepts:

- identify the foods most vulnerable,
- prepare response systems and improve communications throughout the food chain, and
- publicize "hotlines" for consumers to contact to report concerns.

"Everything is based on the golden rule of communications," she said, "communicate and coordinate."

While the Netherlands is a very small country and it is easy to communicate, she said, more needs to be done internationally and "we need to start now."

"The fight against food terrorism requires intelligent preparation, early warnings, broadly based coordination and communications—in the hope that you'll never need to put your preparations into practice," she said.

Presentation accessible on the conference Web site. •

(Pathogens...continued from page 3)

Safely handling animal wastes is also a growing challenge, said Liang. Vast amounts of waste are generated each year by food producers and safe disposal can be difficult.

Globalization of the food supply also presents new safety issues as imported foods continue to dominate the scene in American grocery stores. Sixty-two percent of fish and 32 percent of produce is imported.

Because of mass distribution of food, he said, when there is a problem, it can go national in a big way. The 1990s saw increasing numbers of large, multi-state outbreaks.

"So foodborne illness is still a problem in this country," said Liang. One out of 4 people will become ill during the year; 1 in 1,000 will be hospitalized; the cost of illness is \$6.5 billion a year, he reported.

Progress has been made due to improvements in inspection and regulations, as well as improving hygiene, technologies, and food safety education. Recent data show significant declines in illness among the seven major pathogens.

But in the "war" with microbes, Liang said, microbes have unique advantages. "We need to respect the microbes. They can rapidly adapt, even by the hour. And they have a 3.5 billion-year head start on people. But that's where you come in. The unique human adaptability is the transfer of information and learning from the past," Liang said.

"The world is counting on you," he said, "and once you start, you can't stop. Because the 'bugs' will catch up with you. Are you up to the challenge?"

Presentation accessible on conference Web site. •

■ Consumers: Over-Confident and Making Mistakes

What, exactly, are consumers up to? This was the topic of a panel discussion titled *What They Say They Do...What They Actually Do*. Their general conclusions?

Consumers know more today than ever before about safe food handling. They are aware of many significant pathogens that can be present in food. They believe they are handling food safely.

But they may still be making key mistakes. When consumers report they are “washing their hands,” but there is no soap at the kitchen sink, one researcher noted, it raises questions.

In general, researchers concluded, consumers may not be aware of what they are really doing. Christopher Griffith from the University of Wales Institute, Cardiff, observed that “the most important tool in the kitchen is the human brain—and the best advice to consumers may be to think more about their actions.”

Alan S. Levy, senior scientist with the Food and Drug Administration (FDA), reported on the 2001 Food Safety Survey.

It reveals that a dramatic improvement in consumer food safety knowledge began in 1993 and continues to today. “The trends are remarkable for the magnitude of improvements and the suddenness of the change, which started in 1993,” he said.

Most consumers reported following four key safe food handling practices: clean, separate, cook, and chill.

At the same time, Levy said, “knowledge about foodborne illness doesn’t necessarily translate into action.”

“It does not have a direct effect at all on good handling practices,” he said.

“So what can we draw from this somewhat surprising pattern of results?” he asked.

According to Levy, consumers are

aware of foodborne illness risks—they just don’t think these risks apply to them.

“I mean to suggest that consumers

“...knowledge about foodborne illness doesn’t necessarily translate into action.”

—Alan Levy, FDA

practice safe food behavior only when they perceive a direct risk to themselves. General risk information is not enough. Risk perceptions are the key,” he said.

In addition, Levy concluded, “Consumers might also have quite mistaken ideas about which practices are reducing their risks. Consumers think they know what they are doing and that they are doing a good job.

“Effective education needs to challenge undue complacency and challenge consumers’ assurance that they know what they are doing,” he said.

Levy said consumers also need “practice specific” information. “You need to be inside the person’s head reminding them at the point of behavior and giving them information on *how* they should be doing the action,” Levy said.

Observational research reinforces Levy’s concerns. **Janet Anderson, director of the Safe Food Institute and professor with Utah State University**, has conducted a series of research efforts with support from FDA to see what exactly is going on in consumer kitchens.

Anderson enlisted 122 consumers in a project purportedly designed to “test recipes” in their homes—in fact, the real purpose was to watch their safe food handling. Through videotapes made of the consumers, Anderson has learned a lot about the differ-

ence between what consumers say they do and what they really do.

As Anderson explained, they gave consumers a bag of groceries and recipes. Using 3 small wireless cameras placed around the consumers’ kitchens, the researchers “followed consumers’ hands” as they prepared the meal.

The researchers then followed up with a survey, asking consumers how they thought they handled the food.

Before highlighting the results, Anderson cautioned her listeners to “keep in mind that if someone is going to come in your home with video cameras, you are going to be on your best behavior. And your kitchen is going to be clean. We even had people dusting their fridge as we walked up to the front door. So, keep in mind they are on their best behavior.”

Some of the discrepancies between what consumers *say* and what they *do*:

“How often do you wash your hands with soap before preparing food?”

Sixty percent of consumers *say* they wash their hands all of the time.

But what do consumers really *do*?

Fifty-two percent did wash their hands. “But,” says Anderson, “how many of these were actually effective? To some extent, many were just putting their hands in water.” Thirty-two percent washed with cold water and soap. Only 2 percent actually washed correctly, with hot water, soap, and agitation.

“How long should you spend washing your hands before preparing food?”

On average, consumers said almost a whole minute: 56 seconds.

But what did they actually *do*? The average time actually spent “washing” was 7 seconds.

Some issues just continue to confuse consumers, like final cooking

temperatures. **Consumers were asked for the final cooked temperatures of ground beef and chicken.**

Only 9 percent reported the correct temperature of 160 degrees F for ground beef. Only 3 percent reported the correct temperature of 170 degrees F for chicken breasts. Their responses ranged from 100 to 500 degrees F.

And the results of that confusion showed up in the final product. Forty-six percent of ground beef was undercooked; 82 percent of the chicken entree was undercooked.

Other concerning observational moments: the dad who wiped up a spill from a raw chicken and then turned around and wiped the baby's face with the same towel; and consumers who tasted burgers to see if they were "done."

Anderson's conclusion: "Consumers are not aware of what they are doing in the kitchen." More observational methodologies are needed, she added, to really assess consumer behavior.

Patricia Kendall, professor and extension specialist at Colorado State University, participated in research that incorporated food safety instruction *and* observational research. Kendall, working with a group of other researchers, first identified key safe food handling behaviors: hygiene, cooking, avoiding cross-contamination, safe temperatures, and safe food sources.

The team then provided 30 to 60 minutes of food safety education to low-income consumers enrolled in nutrition classes. A week later, they tested their knowledge with a questionnaire. Then the participants prepared two meals in a community kitchen—while researchers videotaped their safe food handling.

The results? "The group did very well. Ninety-two percent washed their hands and did it correctly," Kendall

reported.

While they didn't use food thermometers—and weren't sure *how* to use food thermometers—they cooked almost all the foods to adequate temperatures.

The key problem area, Kendall observed, was cross-contamination. Consumers weren't aware of the importance of washing after contact with raw foods like meat and poultry.

From the other side of the Atlantic, **Christopher Griffith, professor in food safety at the University of Wales Institute, Cardiff**, echoed similar concerns. Griffith has been working with consumer research for 12 years—including observational studies that are linked with microbiological and risk assessments.

One of the first things he noted was that "if you are going to try to persuade people to improve their food handling habits, they need to be convinced home is where you can acquire food poisoning. Unfortunately, it's also the last place people think of," he said.

Like his American counterparts, Griffith observed that there is a poor correlation between knowledge and actual behavior.

Griffith also pointed out that more needs to be learned about the microbiological risks related to specific consumer practices.

"At first we needed to study consumers because we didn't know what was happening in terms of consumer knowledge and practices.

"Now we are getting a body of knowledge and can identify trends. But now we need to take the research forward to quantitative risk assessment. What really happens in the kitchen? What are the priorities? What are the consequences?"

"This needs then to be linked to cost-benefit analysis and educating the consumer to achieve behavioral change. We are currently using social

marketing to try to achieve this," he explained.

Some of Griffith's research into this area shows:

- While consumers think they are being clean and using hand towels, in fact, hand towels are a "beautiful way of transferring pathogens if used to wipe wet, contaminated hands. If you use a microbially dirty cloth to wipe a surface, you might make the surface look cleaner, but you increase the contamination level very significantly. It's not uncommon for surfaces to be dirtier after cleaning than before," he said.
- Another common practice in homes and food service is washing chicken carcasses. "All it does is spread pathogens. People think they are being hygienic, but we have data to show it is counterproductive and helps spread contamination," Griffith said.

From their microbiological and observational studies, Griffith concludes that cross-contamination is a major factor and frequently underreported because people aren't aware it is happening.

"Consumers need to think about what they are doing in the kitchen. For instance, the more they are handling the food, the greater the chance of cross-contamination," he said.

To read more about Griffith's research projects, see *Journal of Food Protection*, "Consumer Food Handling in the Home," January 2003.

To access these and other consumer presentations, go to the conference Web site and click on September 18. •



■ The Good News/Bad News: People Are Cooking Again

Elizabeth Sloan has been studying trends in consumers' food behaviors for more than 20 years. Where are we today?

"Consumers are cooking again," she said. "for the first time in a long time." But she cautioned, she was using the term "cooking" loosely.

"Why am I concerned about them cooking? Three-quarters of them flunked a cooking quiz." But that's not all, she reported. People are doing the strangest things: like adding two eggs to a cake mix and not taking them out of the shell.

"I can't tell you how many fires have been started by people heating their pizzas—still in the box," she said.

People just aren't reading directions, she reported.

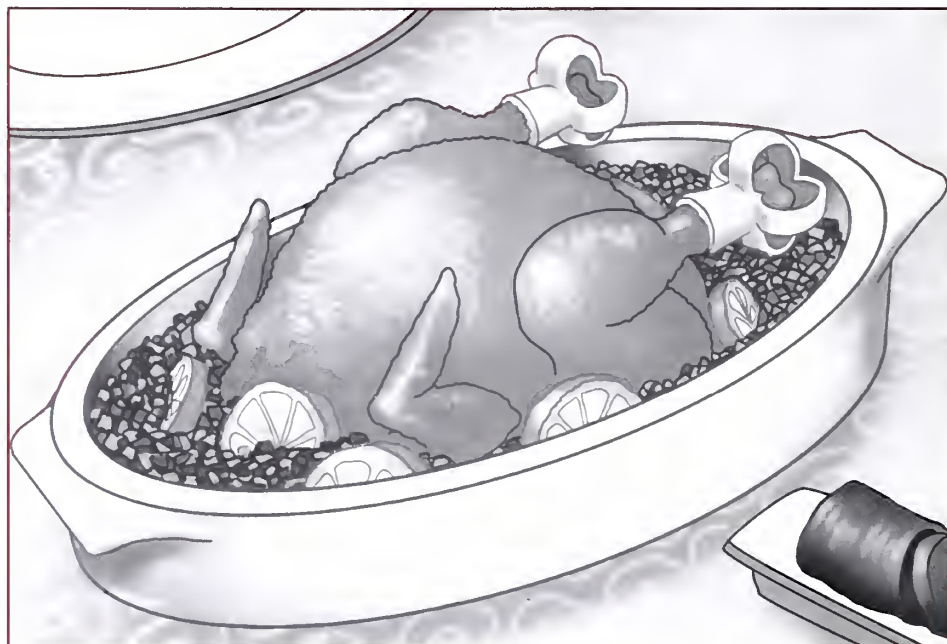
Like other consumer researchers, Sloan noted that people are also overconfident when it comes to their skills and the safety of food. Consumers feel they are doing the things they need to do, she said.

"If they perceive they are doing it right, it's hard to get their attention to improve what they are doing," she said.

Sloan expressed concern over a new generation of raw food products quickly becoming "the rage." One-third of Americans eat sushi, she reported, despite a shortage of trained sushi chefs. In fact, she said, 52 percent of American college menus offer sushi.

Also popular, she reported, salmon tartar, raw oysters, and raw milk. All of these raw foods are important sources of potentially dangerous pathogens.

While people are starting to cook more, takeout is still popular and offers an important area for educators. People are eating later, picking up their dinners, and then running



"Most consumers don't realize that there are 16 million bacteria per square centimeter at the kitchen sink--versus 100 per square centimeter at the toilet!"

—Elizabeth Sloan

errands—putting their food, and themselves, in the danger zone.

On the restaurant scene, Sloan reported that consumers are bored with pizzas and burgers. Seafood sales, on the other hand, she said, "are going through the roof."

To capture consumers' fading interests, restaurants are experimenting with creative cooking techniques including cooking on planks and hot stones, as well as pit-roasting pig. "How," she asked, "do you know when your pit-roasted pig is really done?"

At the same time, however, some restaurants are moving aggressively with food safety. One popular restau-

rant chain now prohibits rare burgers, while another has taken burgers off its kids' menu.

Also of concern for restaurants are allergic reactions. One-half of allergic reactions occur in restaurants, she reported. Asian cuisine is the leading cause of allergic reactions, due to use of nuts and seafood in sauces and seasonings.

A continuing problem in food service, she reported, is labor. In supermarkets and restaurants, 63 percent of part-time help turn over in a year compared with 24 percent for full time staff.

Also new and of concern—convenience stores are becoming more involved in food service. Ninety percent of convenience stores, she said, now prepare fresh food on site.

The bottom line: people are just not aware enough of bacteria, and where risks occur.

"Most consumers don't realize," she said, "that there are 16 million bacteria per square centimeter at the kitchen sink—versus 100 per square centimeter at the toilet!" •

Working Locally

Conference presentations, breakout sessions, and poster presentations demonstrated the ingenuity and energy going into food safety education “locally,” where “global” issues are transformed into real-world actions.

Educators were also updated on “tools” such as grant writing, evaluation, and partnerships.

One thing is clear. From tribal colleges in Montana, to child care centers in Tennessee, educators are working with passion, commitment, and vision to make a difference in the lives of the people they touch.

Here’s just a small sample:

Taking Food Safety to Tribal Colleges

Extension agents in Montana saw a way to reach underserved tribal populations and support community development. They developed food safety training programs for seven tribal colleges and communities.

Supported in part by a \$23,000 grant from the Food Safety and Inspection Service, the extension agents developed training programs for food service owners, managers, and workers.

The program helps to support tribal communities by providing youth development and workforce preparation—and helping to support tourism and trade with safe food operations.

For more information, contact Lynn Paul at: lpaul@montana.edu

Tennessee “Psyched” About Food Safety

“I am so psyched about food safety,” shouted Ken Pearson, environmental specialist with Tennessee’s Knox County Health Department. Pearson was shouting in order to be heard above the din of excited people in the conference exhibit hall where he was staffing a booth.

Pearson has “walked the walk” when it comes to food safety education. His enthusiasm has carried him—and food safety education—into nooks and crannies throughout the state of Tennessee.

He helped develop a handwashing program complete with puppets and magic tricks for child care programs. He also conducted focus groups with homebound seniors to assess their needs and developed a food safety checklist. And, he developed food safety education materials in Braille for the blind.

While many of his initiatives began as projects for National Food Safety Education MonthSM, Pearson reports that food safety is a hot topic all year round.

A firm believer in partnerships, Pearson’s handwashing program for child care utilized materials developed by the national Partnership for Food Safety Education. He then partnered in the state with the Department of Human Services, the Baptist Health System Foundation, and the Tennessee Child Care Provider Training Resource Center.

The program, titled “The Magic of Handwashing,” trains kids and staff about germs and the “how-to’s” of handwashing through a puppet show, magic tricks, and handwashing.

For more information, contact Kenneth Pearson at: kenneth.pearson@knox.county.org

Tailored for Extension

“Keep Food Safe” is a curriculum package developed by Ohio State extension that has everything extension educators need to present food safety education programs in a variety of settings: food stamp clinics, WIC offices, and youth and senior centers.

The program offers five food safety lessons covering everything from “planning” to “leftovers.” There are even mini-lessons for health fairs and demonstrations.

It’s \$22, and that includes shipping and handling. Contact: Media Distribution, Ohio State Univ. 385 Kottman Hall 2021 Coffey Rd. Columbus, OH 43210-1044

From Canada: Big and Bold

A new publication for older adults developed by the Canadian Partnership for Food Safety Education opens up to a 16-inch, 8-page tabloid sporting large type, four colors, and all the information seniors need to keep themselves and their food safe, including:

- the “how to’s” of clean, separate, cook, and chill;
- cooking temperatures and food storage charts;
- safe storage of leftovers;
- information on high-risk foods as well as risks from listeriosis; and
- a food safety crossword puzzle!

Curt Hammond, director of the Canadian Partnership reports that over a quarter million have been distributed throughout Canada. Plus, plans are in place to adapt the piece for use with families as well.

Check it out on their Web site: <http://www.canfightbac.org>



Other News from the Conference

Evaluation Tool Available Online

According to Thomas Shuster of Spectrum Consulting, good evaluation is more complex than just conducting a pre-test, lesson, and post-test.

Shuster has developed an Evaluation Matrix to help educators define and accomplish their research goals. Research and evaluation should be key components of programs from start to finish—and programs need to be adjusted on the basis of midpoint evaluations.

According to Shuster, his suggested matrix is just a start. “People look for a premade evaluation. The fact is it doesn’t exist. Good thinking needs to go into it,” he said.

To access his presentation and Evaluation Matrix, go to the conference Web site, click on September 19, “Breakout Sessions.”

See also conference breakout session titled *Consumer Food Safety Messages and Assessment Tools: Focus on Research Methods*. •

Also Featured Online:

Following is a sample of just a few of the presentations featured on the conference Web site. Go to:

<http://www.fsis.usda.gov/Orlando2002>

- **Food Safety Education in the Child Nutrition Programs:** a summary of food safety education tools distributed through the USDA’s Food and Nutrition Service.
- **Rhode Island Food Safety Project:** demonstrates how schools can establish partnerships to ensure safe food (part of a pilot project funded by the Centers for Disease Control and Prevention).
- **Teaching Arab Homemakers to Keep Food Safe:** Working with an Arab Community Center for Social

Services, Michigan State extension agents developed a publication and presentation for their Arab community.

- **Food Safety Training in a Multi-cultural Environment, Jack in the Box Inc.:** See how this restaurant chain recognizes and manages food safety training for its culturally diverse staff.
- **The Abuela Project: A Community-Based Food Safety Intervention Involving Queso Fresco:** This innovative and trend-setting food safety education intervention relies on community members to solve food safety education problems—and teach others. •

Thermo™ Food Service Magnets

Large magnets for food service featuring cooking temperatures recommended by the *Food Code 2001* are off-press and now available.

According to Holly McPeak of the Food Safety and Inspection Service, the magnets are part of the agency’s Thermo™ campaign to en-

courage use of food thermometers by both consumers and food service. Requests can be sent to: fsis.outreach@usda.gov

(Note: Schools will be receiving the magnets from the U.S. Department of Agriculture’s Food and Nutrition Service.) •

New Grants

A number of grant programs are available for educators. The National Integrated Food Safety Initiative from USDA’s Cooperative State Research, Education, and Extension Service distributed \$14.2 million in grants in 2002. New grant programs were announced in January 2003. Go to: <http://www.reeusda.gov/1700/funding/ourfund.htm>

For information on other grant programs, go to: <http://www.foodsafety.gov/~fsg/fsggrant.html> •

A Great Mix—Science and Food

Science and the Food Supply is a curriculum program for middle and high schools produced in 2002 by the Food and Drug Administration in collaboration with the National Science Teachers Association. More than 11,500 copies have been distributed. The package is free to science teachers.

Albertson’s food stores is a new partner in the companion program offering training for science teachers.

For information, go to: <http://www.foodsafety.gov/~fsg/teach.html> •

New Primer Off-Press

Julia Smith of the Centers for Disease Control and Prevention reported that a revised version of a primer for health care providers on foodborne illness will be off-press in 2003.

The new version of *Diagnosis and Management of Foodborne Illness—A Primer for Health Care Providers* will include information on Norwalk-like viruses, *Salmonella*, and toxoplasmosis. For updates on availability, go to: <http://www.cdc.gov/food-safety/cme.htm> •

International Educators

Educators at the conference came from all over the world: Argentina, Australia, Bermuda, Brazil, Cameroon, Canada, China, Colombia, Ecuador, Guam, Hong Kong, Indonesia, Ireland, Japan, Mexico, the Netherlands, New Zealand, Nigeria, Puerto Rico, and the United Kingdom. Food safety educators are making a difference internationally.

For instance, in a breakout session, Maria Jose Ravalli reported on food safety education initiatives from

the Pan American Health Organization and the World Health Organization. Their work includes developing materials for children and establishing partnerships with media, schools, political leaders, and industry. (Her presentation is available online, see breakout session titled *Making the Grade in Food Safety*.)

To learn more about food safety education initiatives internationally, go to: <http://www.foodsafety.gov/~fsg/fsgintl.html>

The Food Safety Educator will be profiling international initiatives in upcoming issues.

A final note of interest: Many international educators are looking for cooking temperatures in Centigrade. Curt Hammond of Canada wants them to know, "Canada has it!" To access the Canadian Partnership for Food Safety Education's Web site, go to <http://www.canfightbac.org>, and click on Consumer Tools. •

New Zealand... "On Its Way"

Sandra Daly of the New Zealand Food Authority observed that her country tended to see itself as distinct from other nations. New Zealand has a population of 4 million and, as Daly said, "is a long way from...well...almost anywhere.

"We see ourselves as clean, green, and unpolluted. Most significantly, we have never had a serious food safety incident. To suggest that we might need a major food safety program seemed unnecessary...somewhat like

suggesting woolies in Florida!"

However, in the 1990s, she reported, perceptions began to change. "We saw the headlines from overseas, we also saw increases in illness in New Zealand. We saw that geographic isolation was not enough. Plus, nearly 80 percent of our food is exported," reinforcing the need to integrate with international food safety programs.

The New Zealand Food Safety Partnership was formed in 1998. They developed "simple, quirky" messages tuned to the tastes of New

Zealanders and based on the four Fight BAC!® messages.

In July 2002, the New Zealand Food Authority was formed. They are now drafting a 5-year strategy. "After a sluggish start," Daly said, "we are on our way." And, she promised, "I'm thinking globally, but working locally, and will steal your very best ideas!"

To access Daly's presentation, go to session titled, *Making It Real—Highlights from Successful Education Programs*. •

Putting It All Together—New Goals, New Vision

More than 600 people attended the national conference for food safety educators, representing 48 states and 21 countries. By entering data at kiosks throughout the conference center, participants voiced their thoughts on their goals and food safety education gaps.

The last day of the conference, attendees participated in an Interactive Collaborative Planning Process based on the data collected during the conference.

The results:

Participants' education priorities include:

- training food service workers and managers,
- promoting handwashing,
- educating children,
- promoting the four Fight BAC!® principles,
- educating the public about specific pathogens, and
- evaluating food safety education programs.

New tools they need to reach these goals include:

- low-literacy materials

- materials in languages other than English
- consumer behavior research findings, and
- timely release of foodborne illness data.

A full report on the Planning Process is available on the Conference Web site.

Future issues of *The Food Safety Educator* will address many of these topics—as well as new projects and new partnerships as educators continue to "think globally and work locally." •

Public Health In Focus For New Administrator



In late summer 2002, Dr. Garry McKee drove east from Wyoming—his destination was Washington, D.C.

The former director of Wyoming's Department of Health, McKee was on his way to become administrator for the USDA's Food Safety and Inspection Service (FSIS).

McKee is the first administrator in the agency's history to have a public health degree and has more than 30 years' experience in the public health field. For 18 years he was Chief of the Public Health Laboratory in Oklahoma. Prior to that he was Director of Sanitary Bacteriology for the Oklahoma Health Department.

It's no surprise that McKee's vision of FSIS is one that focuses on public health.

Q. What prompted you to leave your home in Wyoming and take on the job of administrator for FSIS?

A. I've said on several occasions that I would never work east of the Mississippi—because I love the West. But, the White House called and said they'd like me to consider this job.

And I knew there was an opportunity, I felt, for me to make a contribution. And that weighed heavily in my decision.

And I'm enjoying the job. I think there's a great opportunity here. I think the timing is right for the public health message. I'm excited about the work we're doing and where we are

going. We can strengthen our regulatory programs and continue the good work that is being done to improve the safety of food. But improving inspection is only one piece of the puzzle. That's why we are committed to supporting food safety education, both at the consumer and food service level.

This agency is positioned to be a full partner in the public health network that is working to improve the health status of Americans.

Q. Many food safety educators work in state and local public health offices. With your experience in public health, what do you think we could do to make their education job easier?

A. The states are so varied in where they house food safety activities—sometimes it's in the health department or the agriculture department. And their needs vary.

But when a foodborne illness outbreak occurs, or a recall, the public turns to public health for information. And public health is counting on us to provide the information they need.

The food safety education materials produced by FSIS do a great job of helping to meet those needs. We need to continue making these tools available. Education is key in *preventing* illness, and that's one of our major objectives.

We are also looking to improve the flow of information when recalls occur. This will make it easier for our public health partners to access relevant information. (Editor's Note: for information on recalls, go to: http://www.fsis.usda.gov/OA/recalls/rec_intr.htm)

Q. Who are some key partners for us at the state and local level?

A. When you spend time in a county public health office, the one thing you learn is how important the public health nurse is.

They are where the rubber meets

the road. They are engaged in a multitude of activities: checking for sexually transmitted diseases, family planning, vaccinations, well-baby checks, WIC—and food safety education.

They are very capable. They are people you can rely on and call on for special issues. So, they are key partners for us and we want our educational materials to work for them.

Physicians are also key partners. And patients are looking to them for information about foodborne illness. But, unfortunately, that doesn't usually occur.

This is especially significant for pregnant women, who are at risk from listeriosis. Research tells us that pregnant women want to hear about these risks from their physicians. But many physicians don't see foodborne illness as something they need to discuss—it's a low priority to them. So we need to work to make it a higher priority for them—and that is one of our goals in the coming year. •



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